MIN F
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Form 3160-3
(June 2015)

Carlsbad Field Office
OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM110836

6. If Indian, Allotee or Tribe Name:

1a. Type of work: [✓] DRILL [ ] REENTER

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other

1c. Type of Completion: [ ] Hydraulic Fracturing [ ] Single Zone [✓] Multiple Zone

7. If Unit or CA Agreement, Name and No.:

8. Lease Name and Well No.: FEARLESS 23 FED COM 507H (322428)

2. Name of Operator: EOG RESOURCES INCORPORATED (7377)

9. API Well No.: 30-025-45216

3a. Address: 1111 Bagby Sky Lobby2 Houston TX 77002

3b. Phone No. *(include area code)*: (713)651-7000

10. Field and Pool, or Exploratory: RED HILLS / WC-025 S253235G LWR BS (97903)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NWNW / 300 FNL / 695 FWL / LAT 32.122437 / LONG -103.6520935

At proposed prod. zone: SWSW / 230 FSL / 1030 FWL / LAT 32.0948823 / LONG -103.650907

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 23 / T25S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*: 30 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 230 feet

16. No of acres in lease: 1160

17. Spacing Unit dedicated to this well: 320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 700 feet

19. Proposed Depth: 10688 feet / 20765 feet

20. BLM/BIA Bond No. in file: FED: NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3431 feet

22. Approximate date work will start*: 12/01/2018

23. Estimated duration: 25 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Stan Wagner / Ph: (432)686-3689	03/02/2018

Title: Regulatory Specialsit

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	09/10/2018

Title	Office
Assistant Field Manager Lands & Minerals	CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Rec OCP 09/20/18

APPROVED WITH CONDITIONS

Approval Date: 09/10/2018

KZ 9/20/18
Requires NSL

(Continued on page 2)

*(Instructions on page 2)

Double sided

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land, or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: NWNW / 300 FNL / 695 FWL / TWSP: 25S / RANGE: 32E / SECTION: 23 / LAT: 32.122437 / LONG: -103.6520935 (TVD: 0 feet, MD: 0 feet)
   PPP: NWSW / 2740 FNL / 1030 FWL / TWSP: 25S / RANGE: 32E / SECTION: 23 / LAT: 32.1157 / LONG: -103.651 (TVD: 10688 feet, MD: 12896 feet)
   PPP: NWNW / 330 FNL / 1030 FWL / TWSP: 25S / RANGE: 32E / SECTION: 23 / LAT: 32.1223553 / LONG: -103.6510208 (TVD: 10644 feet, MD: 10764 feet)
   BHL: SWSW / 230 FSL / 1030 FWL / TWSP: 25S / RANGE: 32E / SECTION: 26 / LAT: 32.0948823 / LONG: -103.650907 (TVD: 10688 feet, MD: 20765 feet)

BLM Point of Contact

Name: Sipra Dahal
Title: Legal Instruments Examiner
Phone: 5752345983
Email: sdahal@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

09/10/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Stan Wagner **Signed on:** 03/02/2018

Title: Regulatory Specialsit

Street Address: 5509 Champions Drive

City: Midland **State:** TX **Zip:** 79702

Phone: (432)686-3689

Email address: Stan_Wagner@eogresources.com

Field Representative

Representative Name: James Barwis

Street Address: 5509 Champions Drive

City: Midland **State:** TX **Zip:** 79706

Phone: (432)425-1204

Email address: james_barwis@eogresources.com

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data Report

09/10/2018

APD ID: 10400027861 **Submission Date:** 03/02/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400027861 **Tie to previous NOS?** **Submission Date:** 03/02/2018

BLM Office: CARLSBAD **User:** Stan Wagner **Title:** Regulatory Specialsit

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM110836 **Lease Acres:** 1160

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** EOG RESOURCES INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: EOG RESOURCES INCORPORATED

Operator Address: 1111 Bagby Sky Lobby2 **Zip:** 77002

Operator PO Box:

Operator City: Houston **State:** TX

Operator Phone: (713)651-7000

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: FEARLESS 23 FED COM **Well Number:** 507H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** RED HILLS **Pool Name:** WC-025 S253235G LWR BS

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** FEARLESS 23 FED COM **Number:** 507H/508H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 30 Miles **Distance to nearest well:** 700 FT **Distance to lease line:** 230 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Fearless_23_Fed_Com_507H_signed_C_102_20180302075008.pdf

Well work start Date: 12/01/2018 **Duration:** 25 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD27 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	300	FNL	695	FWL	25S	32E	23	Aliquot NWNW	32.122437	-103.6520935	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 110836	3431	0	0
KOP Leg #1	50	FNL	1008	FWL	25S	32E	23	Aliquot NWNW	32.1231184	-103.6510757	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 110836	-6765	10206	10196
PPP Leg #1	330	FNL	1030	FWL	25S	32E	23	Aliquot NWNW	32.1223553	-103.6510208	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 110836	-7213	10764	10644

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	2740	FNL	1030	FWL	25S	32E	23	Aliquot NWSW	32.1157	-103.651	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 015913	-7257	12896	10688
EXIT Leg #1	330	FSL	1030	FWL	25S	32E	26	Aliquot SWSW	32.0951572	-103.6509055	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108970	-7257	20665	10688
BHL Leg #1	230	FSL	1030	FWL	25S	32E	26	Aliquot SWSW	32.0948823	-103.650907	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108970	-7257	20765	10688

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

will be hydraulically operated and the ram type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil and Gas Order No. 2.

Requesting Variance? YES

Variance request: Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line). Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation. Centralizers will be placed in the 9-7/8" hole interval at least one every third joint. Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.
Testing Procedure: Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes. Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

Choke Diagram Attachment:

Fearless_23_FC_508H_5_M_Choke_Manifold_20180301094941.pdf

Fearless_23_FC_508H_Co_Flex_Hose_Certification_20180301094941.PDF

Fearless_23_FC_508H_Co_Flex_Hose_Test_Chart_20180301094942.pdf

BOP Diagram Attachment:

Fearless_23_FC_508H_5_M_BOP_Diagram_20180301094957.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	750	0	750	3431	2681	750	J-55	54.5	STC	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4000	0	4000	3431	-569	4000	J-55	40	LTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	12.25	9.625	NEW	API	N	4000	4600	4000	4600	-569	-1169	600	HCK-55	40	LTC	1.125	1.25	BUOY	1.6	BUOY	1.6
4	PRODUCTION	8.75	5.5	NEW	API	N	0	20765	0	10688	3431	-7257	20765	HCP-110	17	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6

Casing Attachments

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Fearless_23_FC_507H_BLM_Plan_20180301095415.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20180301095439.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20180301095448.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20180301095457.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	0	0	0	0	0	0	0	0
SURFACE	Lead		0	750	1075	1.74	13.5	1870	25	Class C	Lead: Class C + 4% Gel + 2% CaCl2 + 0.25 pps Celloflake (TOC @ Surface)
SURFACE	Tail		750	750	385	1.34	14.8	515	25	Class C	Tail: Class C + 2.0% CaCl2
INTERMEDIATE	Lead		0	4600	1150	1.9	12.7	2185	25	Class C	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
INTERMEDIATE	Tail		4600	4600	200	1.33	14.8	266	25	Class C	Tail: Class C + 0.13% C-20
PRODUCTION	Lead		4100	20785	220	3.21	11	706	25	Class H	Lead: 50:50 Poz:H + 5.0% Salt + 3.0% CPT-45 + 0.4% CPT-503P + 1.0% CPT-19 + 5.0% Gypsum + 0.15% CPT-20 + 0.15% Citric Acid (TOC @ 4,100')
PRODUCTION	Tail		20785	20785	850	1.2	14.4	1020	25	Class H	Tail: 50:50 Poz:H + 0.25% CPT-503P +

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											0.8% CPT-16A + 0.2% CPT-35 + 0.4% CPT-39 + 0.25% CPT-20

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: (A) A Kelly cock will be kept in the drill string at all times. (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times. (C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.
Describe the mud monitoring system utilized: An electronic pit volume totalizer (PVT) will be utilized on the circulating system to monitor pit volume, flow rate, pump pressure and stroke rate.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
750	4600	WATER-BASED MUD	8.6	8.8							
4600	10688	OIL-BASED MUD	8.8	9							
0	750	WATER-BASED MUD	8.6	8.8							

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Open-hole logs are not planned for this well.

List of open and cased hole logs run in the well:

DS

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5001

[redacted]

Anticipated Bottom Hole Temperature(F): 170

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Fearless_23_FC_507H_H2S_Plan_Summary_20180301095604.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Fearless_23_Fed_Com_507H_Wall_Plot_20180301095626.pdf

Fearless_23_Fed_Com_507H_Planning_Report_20180301095625.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Fearless_23_FC_507H_Proposed_Wellbore_20180301095653.pdf

Fearless_23_FC_507H_Rig_Layout_20180301095653.pdf

Fearless_23_FC_507H_Wellhead_Cap_20180301095653.pdf

Fearless_23_Fed_Com_GPC_20180302075027.pdf

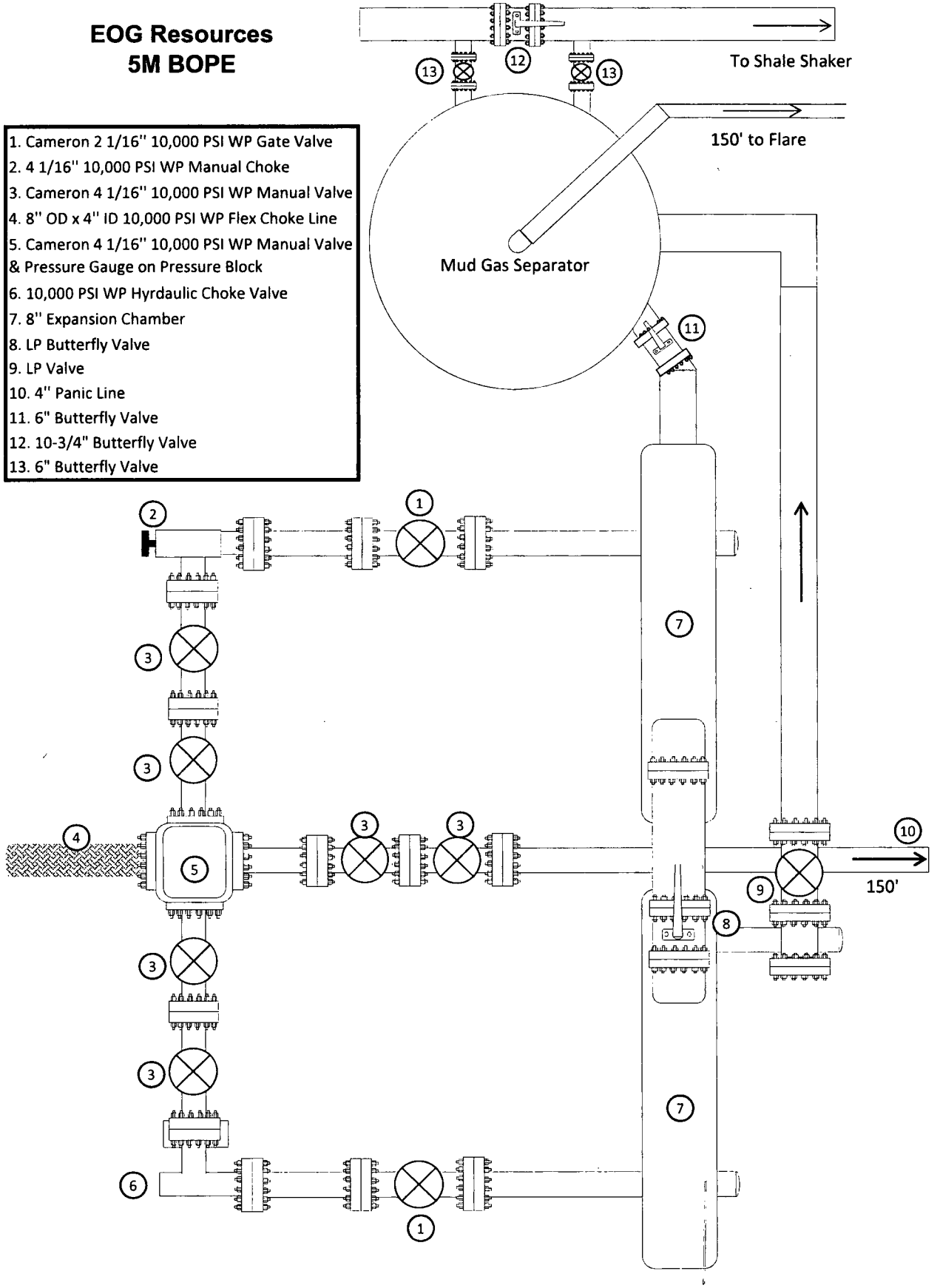
Fearless_23_FC_507H_response_7_23_18_20180723102203.pdf

Other Variance attachment:

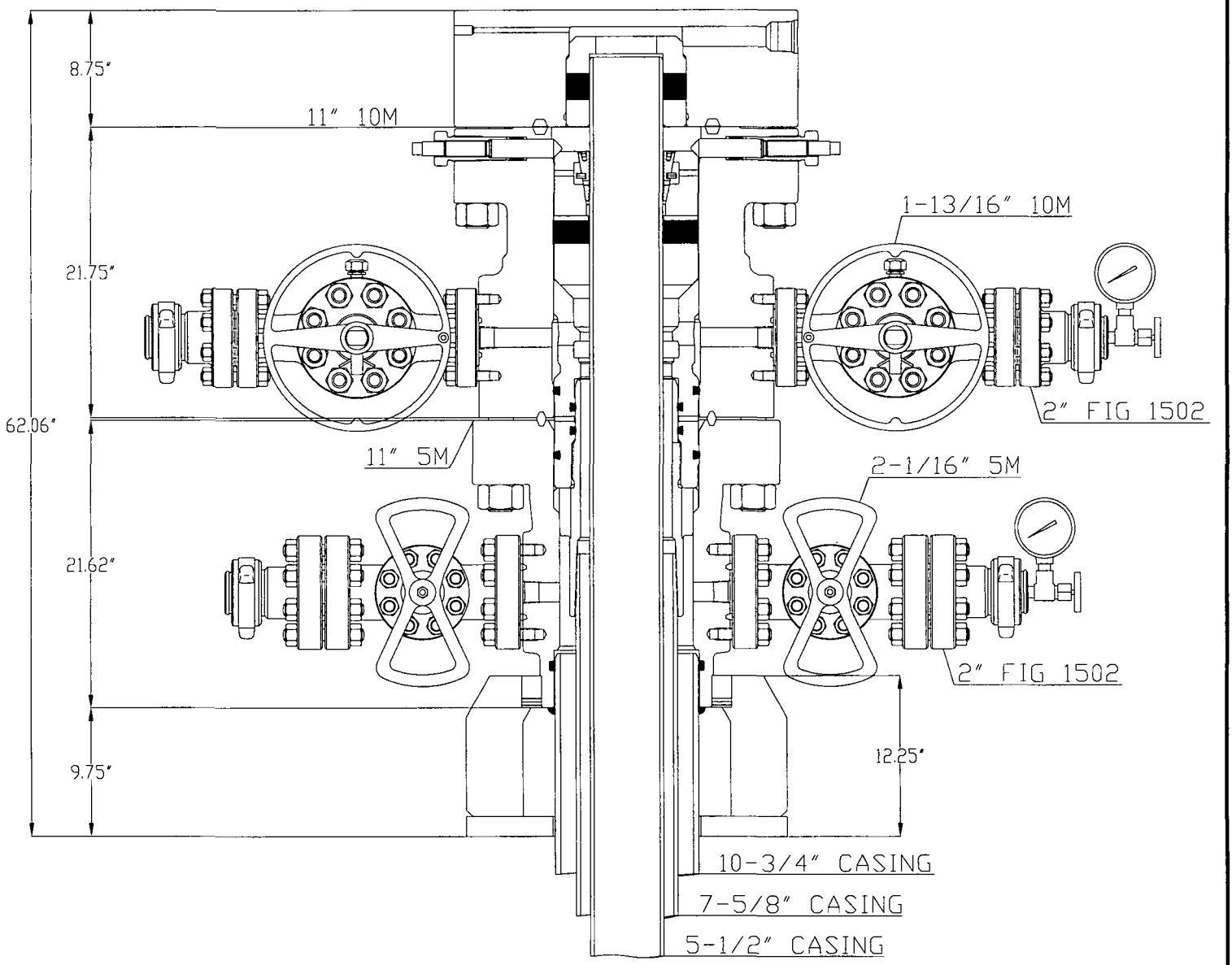
Exhibit 1a

EOG Resources
5M BOPE

1. Cameron 2 1/16" 10,000 PSI WP Gate Valve
2. 4 1/16" 10,000 PSI WP Manual Choke
3. Cameron 4 1/16" 10,000 PSI WP Manual Valve
4. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
5. Cameron 4 1/16" 10,000 PSI WP Manual Valve & Pressure Gauge on Pressure Block
6. 10,000 PSI WP Hyrdaulic Choke Valve
7. 8" Expansion Chamber
8. LP Butterfly Valve
9. LP Valve
10. 4" Panic Line
11. 6" Butterfly Valve
12. 10-3/4" Butterfly Valve
13. 6" Butterfly Valve



EOG 5M Choke Manifold Diagram (rev. 3/21/14)



*CONCEPT QUOTE DRAWING
*DIMENSIONS ARE APPROXIMATE

EOG RESOURCES

10-3/4" X 7-5/8" X 5-1/2"
FBD-100 WELLHEAD SYSTEM
QUOTE: HOU - 102101

DWN	BAY	2/22/17
CHK		
APP		
	BY	DATE

Worldwide Expertise - Global Strength

DRAWING NO
WH-16618

Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manfacturer: No

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		**P.O. Number:** RIG #123
		Asset # M10761
HOSE SPECIFICATIONS		
Type: CHOKE LINE		**Length:** 35'
I.D. 4" *INCHES*		**O.D.** 8" *INCHES*
WORKING PRESSURE 10,000 *PSI*	**TEST PRESSURE** 15,000 *PSI*	**BURST PRESSURE** *PSI*
COUPLINGS		
Type of End Fitting 4 1/16 10K FLANGE		
Type of Coupling: SWEDGED	**MANUFACTURED BY** MIDWEST HOSE & SPECIALTY	
PROCEDURE		
Hose assembly pressure tested with water at ambient temperature.		
TIME HELD AT TEST PRESSURE 1 *MIN.*	**ACTUAL BURST PRESSURE:** 0 *PSI*	
COMMENTS: SN#90067 M10761 Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
Date: 6/6/2011	**Tested By:** BOBBY FINK	**Approved:** MENDI JACKSON

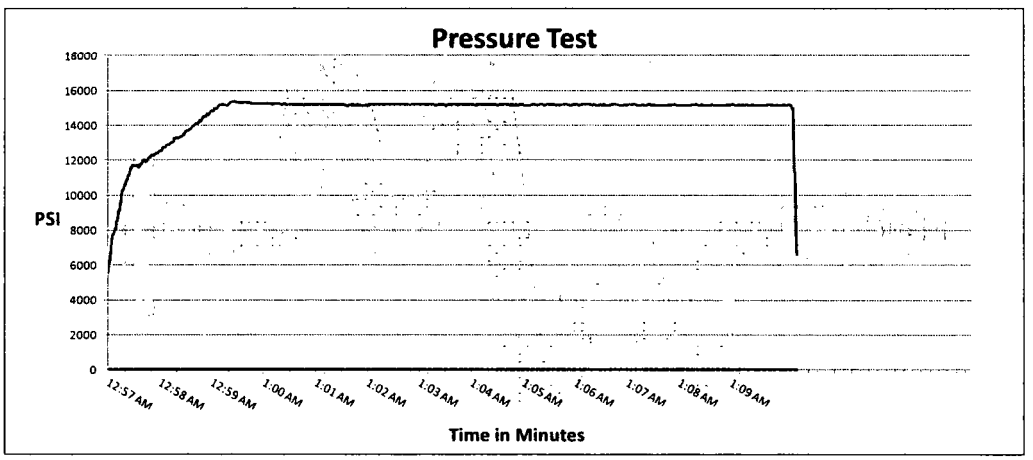
Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: CACTUS

SALES ORDER# 90067

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
C & K	35'	4 1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
4"	8"	6.62"	6.68"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies		90067



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 1/4 Minutes		15439 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Bobby Fink*

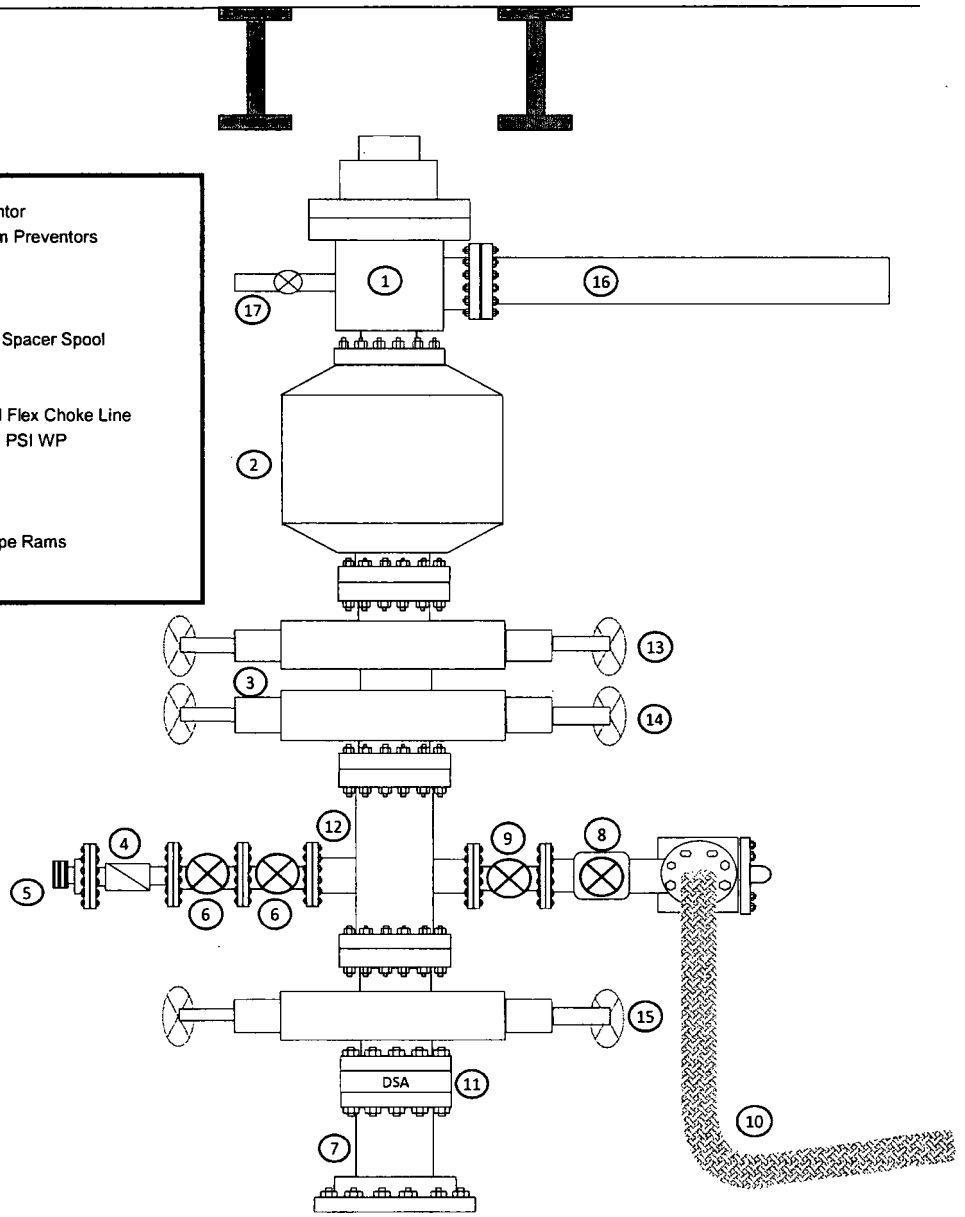
Approved By: *Mendi Jackson*

Mendi Jackson

Exhibit 1
EOG Resources
5M BOPE

Rig Floor

1. 13 5/8" Rotating Head
2. NOV 13 5/8" 5,000 PSI WP GK Annular Preventor
3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors
4. 2 1/16" - 10,000 PSI WP Check Valve
5. 10,000 PSI WP - 1502 Union to kill line
6. 2 1/16" - 10,000 PSI WP Manual Valves
7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool
8. 4 1/16" 10,000 PSI WP HCR Valve
9. 4 1/16" 10,000 PSI WP Manual Valve
10. 6" OD x 3" ID 10,000 PSI WP Steel Armoured Flex Choke Line
11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP
12. Mud Cross - 13 5/8" 10,000 PSI WP
13. Blind Rams
14. Pipe Rams
15. 13 5/8" Cameron Type "U" 10,000 PSI WP Pipe Rams
16. Flow Line
17. 2" Fill Line



See previously attached Drill Plan

EOG RESOURCES, INC.
FEARLESS 23 FED COM NO. 507H

1. GEOLOGIC NAME OF SURFACE FORMATION:
Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	723'
Top of Salt	1,076'
Base of Salt / Top Anhydrite	4,535'
Base Anhydrite	4,761'
Lamar	4,761'
Bell Canyon	4,786'
Cherry Canyon	5,766'
Brushy Canyon	7,406'
Bone Spring Lime	8,906'
1st Bone Spring Sand	9,871'
2nd Bone Spring Sand	10,426'
TD	10,688'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	5,766'	Oil
Brushy Canyon	7,406'	Oil
Bone Spring Lime	8,906'	Oil
1st Bone Spring Sand	9,871'	Oil
2nd Bone Spring Sand	10,426'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13.375" casing at 750' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 750'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0 – 4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,600'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-20,765'	5.5"	20#	HCP-110	BTC	1.125	1.25	1.60

Variance is requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
13-3/8" 750'	1075	13.5	1.74	9.17	Lead: Class C + 4% Gel + 2% CaCl2 + 0.25 pps Celloflake (TOC @ Surface)
	385	14.8	1.34	6.35	Tail: Class C + 2.0% CaCl2
9-5/8" 4,600'	1150	12.7	1.90	9.96	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	200	14.8	1.33	6.32	Tail: Class C + 0.13% C-20
5-1/2" 20,765'	220	11.0	3.21	19.24	Lead: 50:50 Poz:H + 5.0% Salt + 3.0% CPT-45 + 0.4% CPT-503P + 1.0% CPT-19 + 5.0% Gypsum + 0.15% CPT-20 + 0.15% Citric Acid (TOC @ 4,100')
	850	14.4	1.20	4.81	Tail: 50:50 Poz:H + 0.25% CPT-503P + 0.8% CPT-16A + 0.2% CPT-35 + 0.4% CPT-39 + 0.25% CPT-20

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 750'	Fresh - Gel	8.6-8.8	28-34	N/c
750' – 4,600'	Fresh-Gel	8.6-8.8	28-34	N/c
4,600' – 20,765' Lateral	Oil Base	8.8-9.0	58-68	N/c - 6

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR–CCL Will be run in cased hole during completions phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 170 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 5001 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 5000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

See previously attached Drill Plan

See previously attached Drill Plan

EOG RESOURCES, INC.
FEARLESS 23 FED COM #507H

Hydrogen Sulfide Plan Summary

A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

- Well control equipment
  a. Flare line 150' from wellhead to be ignited by flare gun.
  b. Choke manifold with a remotely operated choke.
  c. Mud/gas separator

- Protective equipment for essential personnel.

  Breathing apparatus:
  a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
  b. Work/Escape packs —4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
  c. Emergency Escape Packs —4 packs shall be stored in the doghouse for emergency evacuation.

  Auxiliary Rescue Equipment:
  a. Stretcher
  b. Two OSHA full body harness
  c. 100 ft 5/8 inch OSHA approved rope
  d. 1-20# class ABC fire extinguisher

- H2S detection and monitoring equipment:
  The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
  (Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
  a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
  c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
FEARLESS 23 FED COM #507H

- Mud program:
  The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

- Metallurgy:
  All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

- Communication:
  Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
FEARLESS 23 FED COM #507H

Emergency Assistance Telephone List

PUBLIC SAFETY:	**911 or**
Lea County Sheriff's Department	(575) 396-3611
Rod Coffman	
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

EOG Resources, Inc.	
EOG / Midland	Office (432) 686-3600

Company Drilling Consultants:	
Jett Dueitt	Cell (432) 230-4840
Blake Burney	

Drilling Engineer	
Steve Munsell	Office (432) 686-3609
	Cell (432) 894-1256

Drilling Manager	
Floyd Hernandez	Office (432) 686-3716
	Cell (817) 682-4569

Drilling Superintendent	
Jason Fitzgerald	Office (432) 848-9029
	Cell (318) 347-3916

H&P Drilling	
H&P Drilling	Office (432) 563-5757
H&P 415 Drilling Rig	Rig (432) 230-4840

Tool Pusher:	
Johnathan Craig	Cell (817) 760-6374
Brad Garrett	

Safety	
Brian Chandler (HSE Manager)	Office (432) 686-3695
	Cell (817) 239-0251

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE
620 E. GREENE ST.
CARLSBAD, NM 88220
BLM_NM_CFO_APD@BLM.GOV

In Reply To:
3160 (Office Code)
[NMNM110836]

07/19/2018

Attn: STAN WAGNER
EOG RESOURCES INCORPORATED
1111 BAGBY SKY LOBBY2
HOUSTON, TX 77002

Re: Receipt and Acceptability of Application for Permit to Drill (APD)

FEDERAL - NMNM110836

Well Name / Number:	**FEARLESS 23 FED COM / 507H**
Legal Description:	T25S, R32E, SEC 23, NWNW
County, State:	LEA, NM
Date APD Received:	03/02/2018

Dear Operator:

The BLM received your Application for Permit to Drill (APD), for the referenced well, on 03/02/2018 . The BLM reviewed the APD package pursuant to part III.D of Onshore Oil and Gas Order No.1 and it is:

1. ☑ Incomplete/Deficient (*The BLM cannot process the APD until you submit the identified items within 45 calendar days of the date of this notice or the BLM will return your APD.*)

- ☐ Well Plat
- ☑ Drilling Plan
- ☐ Surface Use Plan of Operations (SUPO)
  - ☐ Certification of Private Surface Owner Access Agreement
- ☐ Bonding
- ☐ Onsite (The BLM has scheduled the onsite to be on)
  This requirement is exempt of the 45-day timeframe to submit deficiencies. This requirement will be satisfied on the date of the onsite.
- ☐ Other

[Please See Addendum for further clarification of deficiencies]

2. ☐ Missing Necessary Information (*The BLM can start, but cannot complete the analysis until you submit the identified items. This is an early notice and the BLM will restate this in a 30-day deferral letter, if you have not submitted the information at that time. You will have two (2) years from the date of the deferral to submit this information or the BLM will deny your APD.*)

[*Please See Addendum for further clarification of deficiencies*]

NOTE: The BLM will return your APD package to you, unless you correct all deficiencies identified above (item 1) within 45 calendar days.

- The BLM will not refund an APD processing fee or apply it to another APD for any returned APD.

Extension Requests:

- If you know you will not be able to meet the 45-day timeframe for reasons beyond your control, you must submit a written request through email/standard mail for extension prior to the 45th calendar day from this notice, **09/02/2018.**

- The BLM will consider the extension request if you can demonstrate your diligence (providing reasons and examples of why the delay is occurring beyond your control) in attempting to correct the deficiencies and can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an extension, the BLM will return the APD as incomplete after the 45 calendar days have elapsed.

    - The BLM will determine whether to grant an extension beyond the required 45 calendar days and will document this request in the well file. If you fail to submit deficiencies by the date defined in the extension request, the BLM will return the APD.

APDs remaining Incomplete:

- If the APD is still not complete, the BLM will notify you and allow 10 additional business days to submit a written request to the BLM for an extension. The request must describe how you will address all outstanding deficiencies and the timeframe you request to complete the deficiencies.

    - The BLM will consider the extension request if you can prove your diligence (providing reasons and examples of why the delay is occurring) in attempting to correct the deficiencies and you can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an additional extension, the BLM will return the APD as incomplete.

If you have any questions, please contact Sipra Dahal at (575) 234-5983.

Sincerely,

Cody Layton
Assistant Field Manager

cc: Official File

ADDENDUM - Incomplete/Deficient Clarifications

ADDENDUM - Deficient

Engineering Comments

- BOP requirements are not met
  State in Sec. 2 that a multibowl wellhead will be used. Added sec 2.

- Bottom hole pressures and hazards inadequate and/or incomplete
  Submit a new BHP and SHP because they are the same.

BHP 5001

SHP 2649.64

APD ID: 10400027861 **Submission Date:** 03/02/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

FEARLESS23FC507H_vicinity_20180301141403.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Fearless_26_Fed_Com_infrastructure_20180301143959.pdf
FEARLESS23FC507H_padsite_20180301143959.pdf
FEARLESS23FC507H_wellsite_20180301144000.pdf

New road type: RESOURCE

Length: 699 Feet **Width (ft.):** 24

Max slope (%): 2 **Max grade (%):** 20

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 24

New road access erosion control: Newly constructed or reconstructed roads will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road. We plan to grade and water twice a year.
New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: 6" of Compacted Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: An adequate amount of topsoil/root zone will be stripped by dozer from the proposed well location and stockpiled along the side of the welllocation as depicted on the well site diagram / survey plat.

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainage crossings

Road Drainage Control Structures (DCS) description: N/A

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

FEARLESS23FC507H_radius_20180301144125.pdf

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Fearless 26 Fed Com CTB located in NE/4 of section 26

Production Facilities map:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Fearless_26_Fed_Com_infrastructure_20180301145150.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: OTHER

Water source type: RECYCLED

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Source land ownership: STATE

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: STATE

Water source volume (barrels): 720000

Source volume (acre-feet): 92.80303

Source volume (gal): 30240000

Water source and transportation map:

Fearless_Water_Map_20180301145332.pdf

Water source comments:

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad.
Construction Materials source location attachment:

Fearless_caliche_Map_20180301145347.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly. Human waste and grey water will be properly contained of and disposed of properly. After drilling and completion operations; trash, chemicals, salts, frac sand, and other waste material will be removed and disposed of properly at a state approved disposal facility.
Amount of waste: 0 barrels

Waste disposal frequency : Daily

Safe containment description: Steel Tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Closed Loop System. Drill cuttings will be disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

FEARLESS23FC505H_padsite_20180301145413.pdf
FEARLESS23FC505H_wellsite_20180301145414.pdf
Fearless_23_FC_507H_Rig_Layout_20180301145515.pdf
Comments: Wellsite, Padsite, Rig Layout

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** FEARLESS 23 FED COM

Multiple Well Pad Number: 507H/508H

Recontouring attachment:

FEARLESS23FC507H_reclamation_20180301145545.pdf

Drainage/Erosion control construction: Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

Drainage/Erosion control reclamation: The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Well pad proposed disturbance (acres): 0	**Well pad interim reclamation (acres):** 0	**Well pad long term disturbance (acres):** 0
Road proposed disturbance (acres): 0	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 0	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 0	**Total interim reclamation:** 0	**Total long term disturbance:** 0

Disturbance Comments: All Interim and Final reclamation is planned to be completed within 6 months. Interim within 6 months of completion and final within 6 months of abandonment plugging. Dual pad operations may alter timing.
Reconstruction method: In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. Areas planned for interim reclamation will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
Soil treatment: Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.
Existing Vegetation at the well pad: Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respreads evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.
Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Stan **Last Name:** Wagner

Phone: (432)686-3689 **Email:** stan_wagner@eogresources.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds. Weeds will be treated if found.
Weed treatment plan attachment:

Monitoring plan description: Reclamation will be completed within 6 months of well plugging. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds.
Monitoring plan attachment:

Success standards: N/A

Pit closure description: NA

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: OnSite meeting conducted 08/30/17

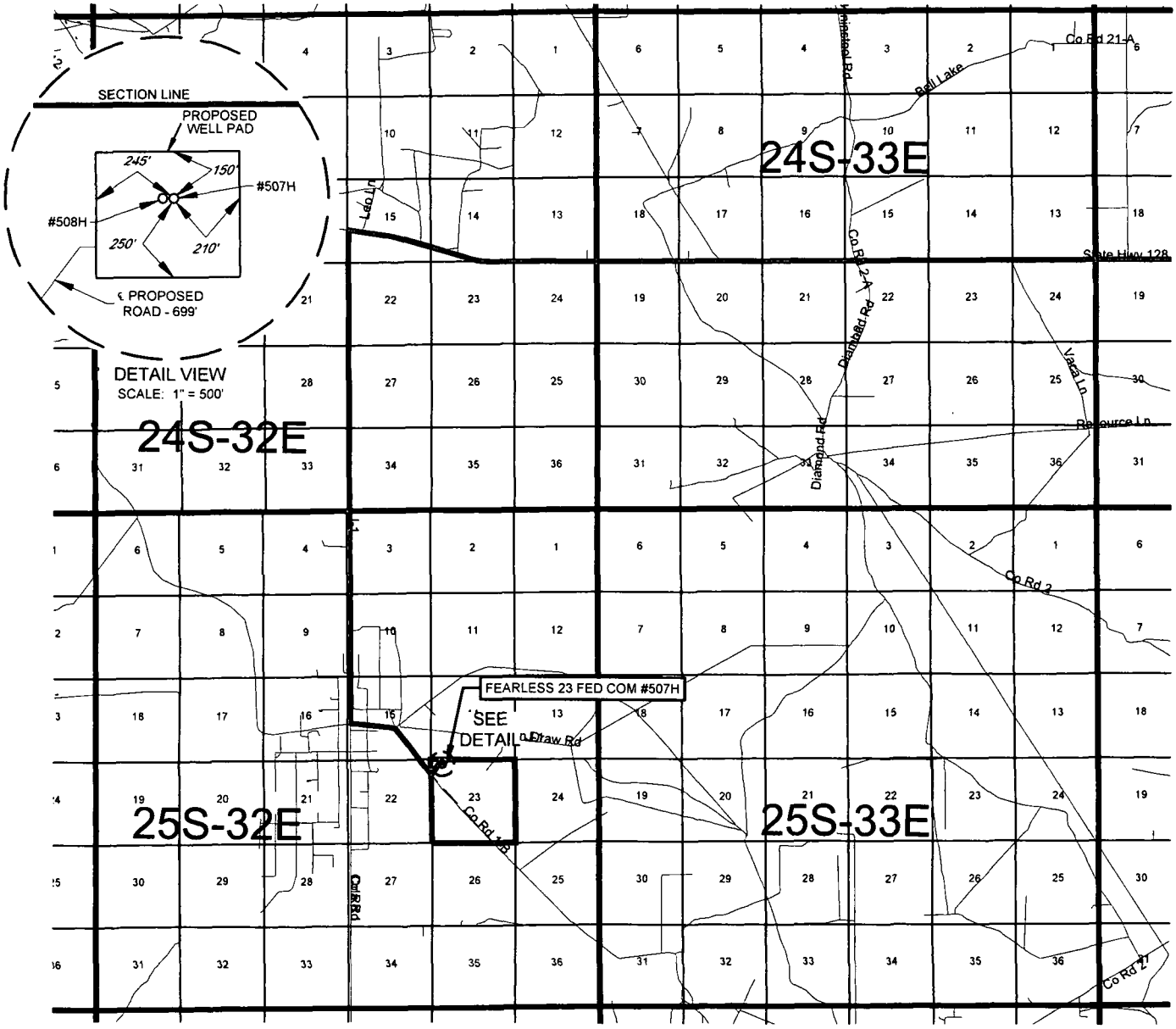
Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

FEARLESS23FC507H_location_20180301145732.pdf
SUPO_Fearless_23_Fed_Com_507H_20180301145821.pdf
Fearless_23_Fed_Com_GPC_20180302075046.pdf

EXHIBIT 2
VICINITY MAP



eog resources, inc.

LEASE NAME & WELL NO.: FEARLESS 23 FED COM #507H

SECTION 23 TWP 25-S RGE 32-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 300' FNL & 695' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-18 S. & NM-128 W, GO WEST ON NM-128 W ±30.0 MILES, THENCE SOUTH (LEFT) ON ORLA RD/J-1 ±5.7 MILES, THENCE EAST (LEFT) ON COTTON DRAW RD./J-1 ±0.5 MILES, THENCE SOUTH (RIGHT) ON COUNTY RD. 1-B ±0.9 MILES, THENCE NORTHEAST (LEFT) ON A PROPOSED RD. ±699 FEET, TO A POINT ±287 FEET SOUTHWEST OF THE LOCATION.

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET.

-N-

SCALE: 1" = 10000'

0' 5000' 10000'

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN
PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140 TELEPHONE:
(817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data Report

09/10/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: NM2308

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

09/10/2018

APD ID: 10400027861 **Submission Date:** 03/02/2018

[redacted]

Operator Name: EOG RESOURCES INCORPORATED

Well Name: FEARLESS 23 FED COM **Well Number:** 507H

Show Final Text

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	PERMIAN	3431	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2708	723	723	ANHYDRITE	NONE	No
3	TOP OF SALT	2355	1076	1076	SALT	NONE	No
4	BASE OF SALT	-1104	4535	4535	SALT	NONE	No
5	LAMAR LS	-1330	4761	4761	LIMESTONE	NONE	No
6	BELL CANYON	-1355	4786	4786	SANDSTONE	NATURAL GAS,OIL	No
7	CHERRY CANYON	-2335	5766	5766	SANDSTONE	NATURAL GAS,OIL	Yes
8	BRUSHY CANYON	-3975	7406	7406	SANDSTONE	NATURAL GAS,OIL	Yes
9	BONE SPRING LIME	-5475	8906	8906	LIMESTONE	NONE	No
10	BONE SPRING 1ST	-6440	9871	9871	SANDSTONE	NATURAL GAS,OIL	Yes
11	BONE SPRING 2ND	-6995	10426	10426	SANDSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10688

[redacted]